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# Special Crops



## Newsletter

Issue 11

April, 2000

### Scholarship Award Announced

The Special Crops Product Team (SCPT) of Alberta Agriculture, Food and Rural Development (AAFRD) and C. V. Technologies Inc. have established an undergraduate scholarship (\$1,250 per annum) in the Faculty of Agriculture, Forestry and Home Economics at the University of Alberta. It is awarded annually to a student with superior academic achievement entering the third or fourth year of a degree program majoring in Agriculture or Nutrition and Food Science, with an interest in production or utilization of special crops or nutraceuticals and functional foods of plant origin. The SCPT and CV Technologies are pleased to announce that first recipient of the "Special Crops Scholarship" is Ms. Cindy Senio of Leduc, Alberta. Ms. Senio is a fourth year student in the Faculty of Agriculture, Forestry, and Home Economics at the University of Alberta. She is pursuing her studies in food science and technology.

Nabi Chaudhary  
Special Crops Product Team

### Upcoming Event

Herbs/Herbfest 2000

July 18-22 - Saskatoon, Saskatchewan

For more information and to register, contact:

Connie Kehler, Saskatchewan Herb & Spice Association

Ph: (306) 694-4622

### Market News

The special crops industry has grown dramatically in the past ten years. Special crop acres in Canada have expanded from just over 2 million acres ten years ago to 5.3 million acres this past year. Agriculture Canada forecast a 10% increase in special crop acres this spring to 5.8 million acres. They forecast a 15% increase in seeded acres in Canada of dry peas and lentils to 2.36 and 1.41 million acres, respectively. However, they forecast a 5% decrease in canary seed and mustard seed to 0.34 and 0.64 million acres, respectively. Other forecasts this winter, from Stat Publishing, Saskatchewan Pulse Growers Commission, Walker Seeds, and ProAg Strategis, would indicate that special crop acres will increase by even more than 10% in Canada this spring as farmers shift acres from canola to crops with better returns.

Provincial cost and return (CAR) statistics indicate that special crops have the best potential returns. A comparison of CAR data, indicates that chickpeas, lentils, and dry peas have some of the highest returns in the province for dryland production. However, an increase in potential return usually also means the producer assumes higher risk.

There have been rumors that special crop acres could increase to 8 to 10 million acres in the next 5 to 10 years if the past ten years were any indication. However, if this was to occur, how will we cope with this substantial increase in production from Canada (refer to table)? There are several things that would need to happen to meet this goal.

First, there will need to be a massive increase in dry peas either consumed in Canada or exported. An increase in domestic consumption can be achieved if hog numbers in western Canada nearly double in the next ten years to supply a second shift at the Maple Leaf plant in Brandon and the Schneider's plant to be built in Winnipeg. As well, hog producers in western Canada must continue to adopt and to increase the share of dry peas used in their feed ration. In addition, dry peas from Canada need to find a willing market in China as a result of a lower tariff and removal of the value-added tax (VAT), as agreed to, for China's entry into the World Trade Organization (WTO).

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**Special Crop Acres in Canada  
(million acres)**

Crop	Past Crop Years					% Change 1995-2001	Ag Can 2000- 01*	Estimate**		% Change 2001-2005
	95-96	96-97	97-98	98-99	99-00			2005	2010	
Buckwheat	0.04	0.04	0.04	0.04	0.03	0%	0.04	0.10	0.15	+ 250%
Canary seed	0.36	0.58	0.28	0.51	0.36	0%	0.34	0.40	0.70	+ 18%
Chickpeas	0.00	0.01	0.03	0.09	0.34	▲	0.39	0.80	1.20	+100%
Dry beans	0.26	0.21	0.22	0.24	0.38	+ 54%	0.40	0.50	1.00	+ 25%
Dry peas	1.96	1.29	2.10	2.66	2.06	+ 20%	2.36	3.00	3.50	+ 27%
Lentils	0.81	0.75	0.81	0.92	1.23	+ 80%	1.41	1.70	2.00	+ 21%
Mustard	0.65	0.58	0.72	0.69	0.68	0%	0.64	0.75	1.00	+ 17%
Sunflowers	0.11	0.09	0.13	0.17	0.20	+ 90%	0.21	0.25	0.40	+ 19%
<b>TOTAL</b>	<b>4.19</b>	<b>3.55</b>	<b>4.33</b>	<b>5.32</b>	<b>5.28</b>	<b>+ 38%</b>	<b>5.79</b>	<b>7.50</b>	<b>9.95</b>	<b>+ 30%</b>

\* Forecast from Agriculture Canada for this crop year

\*\* Best-case scenario forecast for special crop acres in five years

Second, Canada will need to continue to increase lentil and chickpea market share by displacing traditional production regions, (i.e., Middle East and Australia). At the same time, new chickpea varieties are required with disease resistance and frost tolerance to extent the favorable growing area in western Canada and reduce input costs.

Third, dry bean acres will need to spread to dryland regions in western Canada with the development of solid seeded varieties of black and pinto beans with better frost tolerance. This increase in dry bean production could either displace production in traditional growing regions and/or create new dry bean markets, (i.e. India and China).

Fourth, Canada will need to develop a non-bird seed market for canary seed. For instance, according to Agriculture Canada, canary seed has potential as a human food and for industrial uses. Canary seed is suitable for multi grain bread and condiments because it has higher protein than red spring wheat, and higher oil content than corn. In addition, it has a high starch content making it suitable for some industrial uses, such as cosmetics.

Fifth, Canadian mustard exports need to continue to grow at by at least 4% each year and it is imperative that buckwheat production jumps up due to the development of higher yielding, self-pollinating, and frost tolerant varieties. In addition, it is relatively important that triticale gains wider acceptance as a livestock feed.

Finally, the acres seeded to spices, herbs and essential oil crops should increase. This could happen as several new small markets emerge. For example, Agriculture Canada indicate good market potential for spelt, kamut, and quinoa. As well, they indicate some potential for cumin, sea buckthorn (a shrub), monarda, and Jerusalem artichoke. Hemp was also indicated as a crop with good potential. However, growth in hemp would depend on the construction of processing plants for both hemp seed and fibre. There are some small processing plants for hemp seed, but none for hemp fibre.

However, in recent weeks there have been a few setbacks in the new crop industry. Consolidated Growers & Processors Inc. went into receivership and left hemp growers in Manitoba high and dry. The world's largest supplier of North American ginseng, Chai-Na-Tai Ltd. of Langley, British Columbia, filed for protection under the Companies' Creditors Arrangement Act (CCAA) on January 28, 2000. Bioriginal Food and Science Corporation dropped plans to build a medicinal herb extraction plant. Bioriginal had 90 producers growing echinacea, feverfew and St. John's wort on contract last year, however it stated that it won't renew these contracts for this crop year. Instead, the company will focus on processing borage and flax crops for essential fatty acids and these crop contracts will be unaffected.

Even though the demise of Consolidated Growers & Processors Inc. has damaged the reputation of the hemp industry, there are other hemp companies that continue to work to develop the hemp industry. These companies



include Prairie Hemp - owned by Manitoba farmers, Gen-X-Research Inc. - based in Regina, Saskatchewan, and Kenex Ltd - based in Chatham, Ontario. According to an article in the Western Producer (March 16, 2000), these companies have indicated that they may try to hold back hemp seed production this crop year to use up the hemp seed left over from Consolidated Growers & Processors Inc. This plan will depend on how long hemp seed is tied up by bankruptcy proceedings. Growers in Manitoba and Saskatchewan who contracted with Consolidated Growers & Processors Inc. hold about 1,125 tonnes of hemp seed.

CV Technologies - based in Edmonton, Alberta and Canada Safeway announced (Edmonton Journal, March 17, 2000), an arrangement to sell CVT's line of HerbTech brand in Safeway in-store pharmacies. These products included St. Johns' wort, ginseng, and ginkgo biloba. In addition, CV Technologies recently arranged a deal with Dupont to endorse CVT's patented ChemBioPrint technology platform for testing natural health products.

In conclusion, special crop acres are expected to continue to ebb and flow on an upward trend over the next five to ten years. It is reasonable to assume that Canada will carry on it's dominant export position in several of the bulk special commodities while creating several new niche markets in the herb and spice industry. There is also some good indications that the industry will continue to look for ways to add value to these commodities prior to export or end-use.

Jeff Ward  
Provincial Market Analyst, Crops  
Alberta Agriculture, Food & Rural Development

## Pulse Canada Initiative

Pulse Canada has contracted HAK & Associates Ltd to conduct a study on behalf of Pulse Canada's Quality and Product Utilization Committee. The purpose of this contract position is to conduct activities related to:

- ▶ The development of consensus and action on pulse quality research priorities in Canada that will ensure global leadership in commercially relevant pulse quality assessment. This will be done through consultation with the Canadian research community and the pulse industry;
- ▶ The development of a strategy for public and industry funded research programs leading to increased use of pulse constituents including starch, protein, fibre, enzymes, etc. in food and industry applications.

For more information on this initiative and/or how you can contribute contact: Lyle Minogue

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## 1999 Special Crops Processors Survey - Saskatchewan

### 1. Background

In the past two decades the pattern of production and marketing of field crops in Saskatchewan has undergone significant change in response to economic forces at both the domestic and international level.

International subsidization of the traditional range of Saskatchewan grain crops, elimination of transportation supports for exports, and more intensified land use for crop production are among the factors leading to a rise in production of special crops in general, particularly pulses and, more recently, herbs and spices.

The increase in production of special crops in Saskatchewan has been dramatic. For example, recent reports from Sask. Agriculture & Food indicate that:

- ▶ Production of special crops reached a record 2.6 million tonnes in 1998, up from less than 0.3 million tonnes in 1982.
- ▶ The area seeded to special crops in 1998 was a record 4.0 million acres, up from about 0.4 million acres in 1982.
- Two pulse crops – lentils and peas – accounted for only about 0.1 million acres in 1982 compared to 2.8 million acres in 1998.
- The number of special crop producers in the province increased from fewer than 4,000 in 1982 to more than 17,000 in 1998.

In turning to production of special crops, producers have primarily searched for higher value crops to enhance their business margins. They have also looked for new crops to capture marketing opportunities and for diversification of their crop base to stabilize returns and facilitate complex crop rotations.

Along with these trends, value-added processing has been the recent focus of domestic agricultural policy and of business development strategies for processing firms that are servicing the processing and marketing needs of special crops growers. The special crops processing sector is emerging as a substantial component of value-added economic activity in rural Saskatchewan, with a demonstrated job creation capacity.

As a result, information related to services provided by processors, and to the impact of their business on the economy of rural Saskatchewan, is of vital importance to all stakeholders in the special crops sector. By informing policy and business decisions, such data will enhance service provision and advance prospects for sector diversification and growth. Gathering this data and distributing the information has been undertaken by the Sustainable Production Branch of Sask. Agriculture & Food, which conducted an initial survey of processors in 1995 prior to the current one.



## 2. Results

The goals of the 1999 Special Crops Processors Survey are to gather data that will assist industry stakeholders in assessing the scope and nature of the special crops processing sector, and to provide primary producers with information about processors and the services they offer.

The picture emerging from the survey is one of advancing commercialization of the sector as special crops production increases and marketing patterns change. Considerable recent growth in business output has been accompanied by modest consolidation within the sector. Processing firms are becoming well-established commercial operations with ongoing, non-seasonal employment patterns. The sector has established a significant level of job creation and contributes substantially to economic activity in rural Saskatchewan.

### Number of Processors

- ▶ There are an estimated 128 special crops processors in Saskatchewan, a 10% decline in number since 1995.

### Full-time Employment Equivalents

- ▶ There are an estimated 846 full-time equivalents (person years) of employment in the special crops sector.
- ▶ The average number of full-time equivalents is 6.7 per processor.
- ▶ Total annual payroll for the sector is estimated at \$21 million.

### Number of Employees

- ▶ There are an estimated 1,086 employees in the sector, up 6% from 1995.
- ▶ The average number of employees per processor is 8.6, up from 7.2 in 1995.
- ▶ Employment is concentrated (64% of all employees) in the year-round, full-time category.
- ▶ Only 10% of processors have no year-round, full-time employees.
- ▶ Less than 2% of processors have no employees at all.
- ▶ Half (51%) of all processors plan to expand within three years and 30% plan to expand within one year.

### Crops Processed

- ▶ The special crops most commonly processed are peas (86% of processors) and lentils (75% of processors).
- ▶ Canaryseed is the third (53% of processors) and chickpea the fourth (40% of processors) most common.
- ▶ The percentage of firms processing a particular crop has increased for all crops since 1995 but has increased dramatically for chickpeas (by 2748%), for organic grains (by 1112%), and for triticale (21% vs. 0%).

### Value-added Activities

- ▶ The total volume of all processing activities is estimated at 3.55 million tonnes.
- ▶ Cleaning, bulk loading, and bagging account for nearly all processing (97%).
- ▶ Secondary processing activities such as seed splitting, colour sorting, and feed processing are concentrated among relatively few processors.

- ▶ While the average cleaning plant capacity is 6.7 tonnes per hour, the median capacity is 4.5 tonnes per hour.
- ▶ The majority (54% of processors) has a capacity between two and five tonnes per hour.
- ▶ Nearly half of processors (47%) purchase special crops. Nearly half of processors (48%) export special crops.

Source: Saskatchewan Agriculture

The "Special Crops" newsletter is published four times per year. Please direct any questions, comments or suggestions for story ideas to:

Wayne Goruk, "Special Crops" Newsletter

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The newsletter is also available on the Internet at:

<http://www.agric.gov.ab.ca/crops/special/scnews/index.html>

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### Special Crops Product Team

The Special Crops Product Team represents a cross-section of specialists from Alberta Agriculture, Food and Rural Development and Agriculture and Agri-Food Canada. It is a liaison between industry and government. The Team's mission is to lead departmental activities in Special Crops, consistent with industry objectives, in response to diversification, value-added and market place opportunities.

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